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ANAESTHESIA
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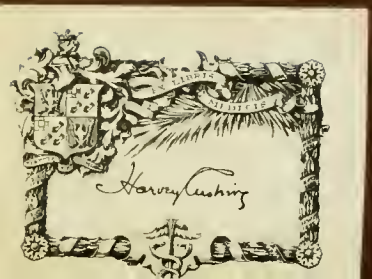

ANÆSTHESIA.

"I HAD a call from Dr. Morton this morning," said our Principal; "he'll be here at chapel exercises to-morrow and will address the school."

"And who is Dr. Morton?" I asked.

I trust Dr. Morton will pardon my ignorance. Let it be remembered in extenuation of that ignorance that, when Dr. Morton began his experiments in Anæsthesia, I was a baby in long dresses; that the greater portion of my days, since I have been capable of taking such a subject into my mind, has been spent in the conning of Davies's course of Mathematics, Fasquelle's French books, and Anthon's Latin series. Let it be remembered, furthermore, that I am not a physician, neither a scientific man—only a woman. Now if I had ever had a tooth extracted, a tumor removed, or an arm amputated—if I had ever been indebted to Anæsthesia for salvation from suffering otherwise inevitable, there would have been no need, I am sure, for me to inquire "Who is Dr. Morton?" But having had in my lifetime no more formidable dental instrument in my mouth than some gentle finger and thumb to remove my uprooted baby-teeth, having never seen a surgeon's knife, and having suffered no more serious operation than the removal with the familiar needle of a splinter from an ulcerated thumb, I was ignorant, and I did inquire "Who is Dr. Morton?"

"Dr. Morton is one of the Peace Commissioners from Jeff Davis," replied our Principal, facetiously, supposing my ignorance feigned.

"Tell me who he is, for really I do not know."

"Do not know! I'm astonished. You ought to know—every body ought to know. He is the man who first introduced ether as an anæsthetic."

Thoroughly ashamed by this time of my ignorance, I finished my coffee in silence.

The following morning, though a great pile of uncorrected school-girl's compositions lay on my writing-desk, I went to chapel to see and hear the man whom every body ought to know. On the stage, by the side of the Principal, was seated a man with a thoughtful, perhaps sad, face and an intelligent blue eye. My curiosity and interest were aroused: I was face to face with a man to whom the suffering every where are indebted, and whose name has been for a quarter of a century ringing in two hemispheres, albeit I had not remembered it. Before me sat a discoverer, one of that class to which Columbus, and Harvey, and Jenner belonged. I looked at his head—well formed, his brow broad, thoughtful. Then I talked with myself: "I wonder if his discovery was made by accident, or was it the result of research, thought, and reasoning. He must be a wealthy man; such a gift to the world should enrich the giver as it doubtless has. I presume Congress has appropriated something handsome—ah! now I remember something about Dr. Morton, concerning his application to Congress after the battle of the Wilderness for—"

Here Dr. Morton was introduced by the Principal. For fifty minutes he chained my attention. It was not his polished style that did the work, for Dr. Morton was not at all times fluent, hesitating, occasionally, for a word, which, however, when secured was forcible. It was the eloquence of truth; it was the story of a discoverer, agitated by hopes and fears, trembling but resolute, groping his way into a mysterious, unexplored country; the story of victory, of disappointments, of persecutions, told with simple pathos by the man who had seen and felt it all. Dr. Morton sketched briefly and modestly the history of his great discovery, dwelling no longer than was imperative upon the opposition and difficulties against which he was forced to make his way in the introduction of ether, that Angel of Mercy, which has brought to the discoverer alone of all the world—to use his thought—suffering instead of comfort. I wish I could reproduce his remarks as I heard them that morning, glowing with feeling. So engaged did I become with his theme that I procured some documents relating to the discovery of ether; among others "The Trials of a Public Benefactor," by Nathan P. Rice, M.D., and the report of the Congressional Committee on Military Affairs and Militia of 1863, to whom was referred Dr. Morton's petition, asking compensation for the discovery and gift to mankind of a practical anæsthetic. I have spent weeks in the examination of these and other documents relating to Dr. Morton's discovery with an interest which few novels have awakened in my mind. Amidst such a mass of interesting material it is difficult to make a selection for a Magazine article. How, in such a space, can there be presented a photograph of a subject about which volumes have been written?

In the year 1844, while a student of the Massachusetts Medical Hospital, Dr. Morton heard, among other lecturers of the Institution, the eminent surgeon Dr. John C. Warren allude to the means of preventing pain. Trials were made with all the agents calculated to accomplish that end; opiates and stimulants were given freely; and experiments were made with animal magnetism and nitrous oxyd or laughing gas, and he personally assisted in demonstrating the utility of these agents before the class of which he was a member. In the same year Dr. Morton heard a lecture on Cerebral Stimulants, embracing ether, from a professor of the college. Among the medicinal uses of this substance was mentioned its relief of toothache. This being germane to his profession—that of a dentist—it found a secure lodging in his mind.

Having a patient a short time after this who was suffering excessively from a tooth, Dr. Morton applied ether to the sensitive cavity, sealing it up, as it is exceedingly volatile, with wax, repeating the application once an hour during the day. On introducing the instrument in search of a sensitive portion of the bone the patient exclaimed: "Doctor, I neither feel the instrument in the tooth nor your hand on my face, though I plainly see it in the looking-glass." The idea seized him "like a grasp of steel," to use his own words, that if the influence of ether could be diffused over the system, the pain of surgical operations might be relieved. But how was this to be accomplished? It was obviously impossible to immerse the whole body in ether as he had the tooth.

From that day Morton began an industrious examination of the character of ether. He read every thing on the subject within his reach. Each bit of information on this absorbing theme was hoarded with a miser's care. He found that ether was ranked as a poison; that Sir Benjamin Brodie had given it to guinea-pigs, and it had killed them; that a jar containing ether having been broken in an apothecary's shop, a maid-servant had died from inhaling the vapor; that medical professors, both in America and Europe, had prohibited the students taking it even for amusement. Morton administered ether to animals and found that it did produce death. From medical text-books he learned that ether may be taken, if diluted with atmospheric air, to relieve the accidental inhalation of chlorine gas, and in several specified diseases; that when inhaled it causes a succession of effects analogous to those produced by laughing gas; that stupefaction generally ensues, while apoplectic conditions are sometimes induced. Here was definite and important information: ether in small quantities could be inhaled with safety, but not without discomfort. Morton immediately commenced a course of gradual experiments with the view of testing the question of the degree of danger attending the inhalation of ether, and of the amount of the vapor which could be safely taken into the lungs. His first experiment was to place ether, with several narcotics, as morphine, opium, etc., in a retort surrounded with a hot towel. Then cautiously, with an anxious, beating heart he inhaled the vapor, little by little. The result was severe headache, accompanied by a numbness which increased as the inhalation progressed.

In the spring of 1846 a student in Morton's laboratory informed him that he had frequently inhaled pure unmixed ether, without experiencing any injurious effects from its use. Shortly after this information Morton, desiring to ascertain all that was to be known concerning the character of ether, consulted a druggist and chemist of Boston, who mentioned several cases which had come under his observation of persons who had taken ether for its exhilarating effects; among others, he spoke of a man who, being rendered wild by its inhalation, had severely injured his head, who yet knew nothing of the injury, when restored to consciousness, until his attention was called to it. It was the general impression that, when taken in large quantities, its effects would be dangerous and lasting, if not fatal.

Advanced on his way by this information, Morton made several experiments on animals. Among the most satisfactory was one in which a water-spaniel was the subject. The head of the animal was held over cotton, saturated with pure ether, until the dog sank to the floor as dead, and for two or three minutes remained insensible to kicks and pinches. A slit was taken from his ear without evoking any signs of pain. Yet in three minutes the dog was bounding upon his master with all his former life. Now, for the first time, Morton communicated his hopes and faith to his brother-in-law, Francis Whitman; to Dr. Hayden, his assistant; and to his legal adviser, R. H. Dana, Jun. This was in June 1846.

In the first real verification on man of Morton's theory he was at once the operator and the subject. His description of this experiment, contained in his memoir to the Academy of Arts and Sciences at Paris, which was presented to that Association by M. Arago, is in the following language:

"Taking the tube and flask, and seating myself in the operating-chair, I commenced inhaling. I found the ether so strong that it partially suffocated me, but produced no decided effect. I then saturated my handkerchief, and inhaled it from that. I looked at my watch, and soon lost consciousness. As I recovered, I felt a numbness in my limbs, with a sensation like nightmare, and I would have given the world for some one to come and arouse me. I thought for a moment I should die in that state, and the world would only pity or ridicule my folly. At length I felt a slight tingling of the blood in the end of my third finger, and made an effort to touch it with my thumb, but without success. At a second effort I touched it, but there seemed to be no sensation. I gradually raised my arm and pinched my thigh, but I could perceive that sensation was imperfect. I attempted to rise from my chair, but fell back. Gradually I regained power over my limbs, and full consciousness. I immediately looked at my watch, and found that I had been insensible between seven and eight minutes. Delighted with the success of my experiment, I immediately announced the result to persons employed in my establishment, and waited impatiently for some one upon whom I could make a full r trial."

Toward the evening of the same day Dr. Morton heard a timid ring of his office door-bell—"such a ring," said he, in addressing our school, "as one of you girls would give as you stood with a throbbing tooth before a dentist's door, with his horrible instruments gleaming before your mental vision." The visitor proved to be a man, with muffled head, who was suffering great pain from a tooth which he wished to have extracted. Shrinking from the operation, he inquired anxiously of Dr. Morton if he could mesmerize. "I didn't exactly tell him that I could, neither did I say that I could not," said Dr. Morton; "for I was very anxious for a patient." Dr. Morton saturated his handkerchief with pure ether, and gave it to his patient, asking him to breathe upon it. Unquestioning as a child the latter obeyed, and almost immediately became unconscious, when, while Hayden held the lamp, Morton extracted a firmly-rooted bicuspid tooth. As it came out the patient turned as white as a sheet of paper, and slid from the chair to the floor. "I never saw a body with breath in it look more like a corpse," is Morton's account. Seconds seemed ages while his patient lay there as in the embrace of death. A fearful dread seized his heart lest he might have sent that soul into eternity. With trembling hands, while the perspiration stood in great drops on his brow, Morton seized his patient by the collar, raised him at arm's-length, where he hung for a moment as straight as a fish, when, losing his hold, the patient dropped into the chair with a bound which inflated his lungs, and started the circulation; the color returned to his face, and immediately he shouted "Glory!" He proved to be a good Methodist. "And I wanted to cry 'Glory hallelujah' with him," said Dr. Morton; "there was not a dry thread on me, I had been so thoroughly frightened, supposing he was dead." The date of this operation was September, 1846.

From the very dawn of science it had been the earnest desire of the medical profession to perform operations without pain. And this desideratum the most eminent surgeons were despairing of attaining. Wrote Velpeau in 1839: "To avoid pain in surgical operations is a chimera which it is not allowable to pursue at the present day. The cutting instrument and pain in operative surgery are two things which never present themselves singly in the mind of the patient; and it becomes necessary for surgeons to admit the association." Sir Benjamin Brodie, in a lecture at St. George's Hospital as late as October, 1846, said: "There is no greater desideratum in surgery and medicine than the means of allaying bodily pain." He then proceeds to express a doubt whether that would ever be found. It is a singular coincidence that Dr. Morton, having discovered this desideratum, demonstrated its efficacy within the twenty-four hours preceding the delivery of this lecture.

"He," says Sydney Smith, "is not the inventor or discoverer who first says a thing, but he who says it so long, loud, and clearly that he compels mankind to hear him." Morton was about to demonstrate that he was possessed of the courage and persistence which Sydney Smith indicates as indispensable characteristics of the discoverer. A man less brave would have hesitated to prosecute the subject. Many philosophers and inquirers have brought their investigations to a point as advanced as that which Morton had attained, and, even when no risk was apparent in prosecuting the subjects, have abandoned them to perish as unripe fruit.

A timid man in Morton's place would have hesitated to proceed against the risks involved. "This man," he would have argued, "came out of that death-like state; will the next one? Is it safe, on this isolated case, to erect a general theory? And if a man should die under my hand, with all the published facts regarding the nature of ether against me, I should be convicted of manslaughter." The thought was enough to make a man shrug his shoulders.

But Morton did not hesitate a moment at this point. "All the world will be interested and will rejoice with me, and the medical profession will be eager to welcome this new means of helping and perfecting the healing art," he reasoned. He was filled with the enthusiasm of the poet. At an early hour the following morning, after an exciting night, he called upon his patient, Mr. Frost, and found him whistling merrily, and engaged in cracker-making, which proved to be his business. "That's a capital way you've got of pulling out teeth, Doctor," he said. "I shall send all my friends to you."

After a consultation with his friend and assistant, Hayden, Morton decided that some impressive experiments in the presence of witnesses and at the hands of surgeons should be made of the effects of ether. He decided upon the Massachusetts General Hospital as the place where, with the permission of its distinguished corps of surgeons, he would make his first public experiment in Anæsthesia. He therefore applied to Dr. Warren, the senior surgeon, then in charge of the hospital. Morton laid the whole matter before that eminent surgeon, and though he failed to get any definite assurance that he should be allowed the opportunity of trying his agent on hospital patients, he did not leave without hope.

Though many successful experiments were performed within the next fortnight it was fourteen days before Dr. Warren directed the house surgeon to inform Morton that he would be permitted to try his discovery upon a patient at the hospital on the following Friday at ten o'clock.

As the time drew near for this test experiment the discoverer grew painfully anxious, "hardly eating or sleeping," says a witness, lest something should occur to render it unsuccessful. He had witnessed phenomena in different patients, which though they excite no anxiety whatever at the present day, when the effects of ether are familiar and understood, would, if

they should occur upon the hospital patient, lead the surgeons to interfere and remove the patient from his hands. Night and day before the experiment was to be made Morton devoted himself to an earnest investigation of the subject, to improvements in his apparatus for administering ether, informing himself as to antidotes in case of unhappy results.

The day and hour at length arrived. Morton, from a delay in the completing of some modification of his apparatus for inhaling the agent, was unavoidably behind the appointment by ten or fifteen minutes. Dr. Warren, having waited this length of time, then rose and said, "As Dr. Morton has not arrived I presume he has some other engagement."

The crowd laughed, and Warren was preparing to proceed with the operation; he raised his knife, the door opened, and Morton, the expected experimenter, appeared. Being especially anxious concerning his patient, his first glance was to assure himself that he was to have a fair subject. Then he looked around upon the crowded amphitheatre. Instead of a staff of surgeons, and a few students and medical men, who, he had supposed, might be present, he found spectators from every profession. And amidst that sea of faces he saw not one which was sympathizing. Blank incredulity, or, at the best, curiosity alone was to be seen. The focus of so many expectant eyes, trembling for the success of his experiment, knowing that in the event of its failure shame and hisses awaited him, for a moment he was confused almost to dizziness. He was aroused by Warren's abrupt "Well, Sir! your patient is ready." With a beating heart he commenced the administration of ether. Morton knew, absorbed as he was, that every sound among his spectators had gradually ceased, and that they were regarding him and the patient on the table with breathless interest. When, at the end of five minutes, the patient being quietly sleeping, he turned to announce the fact to the operating surgeon, he found curiosity and incredulity replaced in the faces of his spectators by astonishment and deepening interest. Warren brought his knife up carefully, as though afraid of frightening his patient. Useless precaution! That form lying on that table of horror was as unconscious as the dead. There was the plunge of the knife and the crimson tide, the waiting assistants with cords ready to pinion the struggling, frantic victim, the listening ears, the shrinking hearts of the crowd, dreading the shrieks as the relentless knife should do its work. But there came not a sound of pain; there was not a movement of the placid features or the composed limbs.

It seemed to Morton's impatient heart that the surgeon worked with wonderful deliberation, and that the operation would never be finished. But it did come to an end; the patient gradually regained his consciousness, and testified that he had felt no pain.

"This was a proud moment," says Dr. Rice, "for the hitherto unnoticed dentist—the medical student, previously undistinguished from any of his fellows. Now was the practicability of what he had imagined fully and satisfactorily proved to the world; and as he stood there at that moment, his breast swelling with the honest pride of success, and his brain giddy with reaction from the first excitement, he formed the cynosure of the eyes of men of all ages and conditions, completely forgetful of self in the excitement of the moment. In the front were grave and dignified men, who, for a better view, had absolutely placed themselves upon their knees on the board floor. On the rows of benches above were mixed students and men of science attracted thither by the novelty of the announcement, grouped in every imaginable position, all anxious and breathless as they had been while watching that small group in the centre of the room. Soon, however, the spell was broken, and crowding around him, they offered him their congratulations and besieged him with questions."

This first public demonstration of the anæsthetic power of ether was made on the 16th day of October, 1846. This experiment was immediately followed by others with entire success. Many of the operations were of a most interesting nature. I shall be excused for introducing the following: "A patient had been committed to the hospital with paralysis of the lower extremities. It was decided to apply the actual cautery; a dozen irons, heated to a white heat, were in readiness. The patient was thrown into an anæsthetic state, and the heated irons, one after the other, were drawn up and down his back in a zigzag motion, with the smoke rising, and the skin crisping and cracking like a burning shingle; and when they had been applied nothing but a powdered mass, which was brushed from the back with the hand, was left of the skin. The patient indicated no suffering, and testified, when he had come out of his anæsthetic state, that his sensations had been those of unmixed delight."

It has been justly said that the first attitude of the world toward a great discovery is incredulity and then hostility. This was exemplified in the reception by the medical faculty, and by medical and scientific journals, of the announcement of Morton's discovery. Many of the journals allowed weeks to elapse before any notice was given on the subject. Then it was noticed only to be denounced as "a humbug," "a will-o'-the-wisp," "the last special wonder," a something "which would soon descend to the bottom of that great abyss which had engulfed so many of its predecessor novelties." "We should not consider it entitled to the least notice," said a leading medical periodical of Philadelphia; "but we perceive by a Boston journal that prominent members of the profession have been caught in its meshes." In Paris the announcement of the discovery was received with almost indifference. Velpeau, Roux, Magendie, and others politely declined using the discovery. The councils of Zurich

prohibited the use of ether. In November, 1847, more than a year after the discovery, it had not been tried at all in the Pennsylvania Hospital, one of the largest on the continent; and during that year it is known that several different sermons were preached against the use of ether. "Pain," argued the divines, "was the natural and intended curse of the primal sin; therefore any attempt to do away with it must be wrong." The opposition of others was based upon the ground that pain is salutary. An eminent physiologist expressed a doubt whether there was a true advantage in suppressing pain. "It is a trivial matter," argued this Stoic, "to suffer; and a discovery whose object is the prevention of pain is of slight interest." One could almost wish to see such a man on the surgeon's table.

Letters came pouring in upon Doctor Morton from all parts of the civilized world, many reproaching him with having announced the claims of a humbug. The Parisian academicians charged him with having prematurely published his discovery. "He was besieged," says a witness, "by professional gentlemen, who consumed his time by speculative doubts, questioning the accuracy of his experiments, and repeating the complaints of his antagonists." And the new agent might be used for nefarious purposes, it was objected. The habit had sprung up of using ether like opium for purposes of exhilaration and intoxication. Burglars were using it, etc., etc. Accidents, moreover, resulted from the use of ether in unskillful hands. Objections were urged so perfectly shallow that, but for the fact that every body seemed eager to hurl a stone at the struggling discovery, they would have been puffed away by the breath of public contempt.

A most formidable opposition met the discoverer from his own profession. A meeting of Boston dentists was called, and a committee of twelve appointed to make a formal protest against anæsthesia. This organized opposition made an appeal to the public through the newspapers, which carried with it great weight, particularly as it professed to give a large number of instances in which experiments had failed or produced unfortunate results. Some affecting instances were cited in which young ladies, having inhaled ether, left Dr, Morton's office delirious, in which state they remained for days, with bleeding at the lungs, melancholy, etc.

Prosecutions were threatened for administering ether. A boy, who had inhaled ether, swallowed some blood from his bleeding gum, whence a tooth had been removed. Vomiting it up on his return home, his physician was called, who, detecting the odor of ether, and knowing that it was ranked among the poisons, pronounced the boy poisoned. Rushing off, he entered a complaint against Morton. With this claimants for damages for injury to health started up in all directions, and lawyers' letters came pouring in upon him, threatening exposure and prosecution in case the claims were not settled.

The opposition and persecution which met Dr. Morton at every turn and in every shape would have discouraged an ordinary man. He saw that he must fight or his discovery would be strangled in its infancy. Almost unaided he entered upon the contest. He determined to appeal from physicians to patients, from the profession to the public. But the public must be informed.

By a Congressional report before me it appears that Morton had private resources upon which he determined to draw, in order to settle the struggle for the life of anæsthesia in the most expeditious manner possible. He procured several young physicians at a thousand dollars apiece, whom he instructed in the proper mode of administering ether, and sent them forth, armed with this new agent, and the apparatus which was then thought necessary for its administration, to all parts of the United States, and to London, Paris, and St. Petersburg. He enlarged, at a heavy expense, his apartments, and converted the whole into a hospital, where operations, as he announced to the public, would be performed free, nothing being asked of the patients except their certificates, with the right to use them publicly. He expended several thousand dollars for the manufacture of *pure* ether. He offered to supply this to the wounded in the Mexican war for one cent per patient, but the offer was declined by the Government at Washington.

Wherever these drilled, carefully-instructed agents of Morton approached hospital surgeons their reception was the same. The inhalation of ether was dangerous, they said; the state produced was asphyxia—a partial arrest of the vital process—and they would not encourage their patients to walk along this solemn path, to make this descent into "the valley of the shadow of death," with the possibility that they might be unable to return.

Morton then offered to take his patients from Boston, transport them to the hospitals of other cities, and try the experiments there. This proposition being accepted, he procured a number of patients for fifty or a hundred dollars per head to go with him to these cities and have bad teeth extracted. After fighting objections and delays of various characters from surgeons and patients, the indomitable doctor succeeded in performing a series of experiments which the surgeons acknowledged successful. Congratulating himself upon this high testimony, wrung from the profession, he hoped to be able to overcome the most scrupulous when one of those unfortunate incidents occurred which illustrates somewhat the difficulties which Morton found it necessary to remove.

Ether was administered to a patient who, after a few inhalations, died. The surgeons intimated that Morton must have known the capriciousness of the agent, etc., etc.

"I took," says Dr. Morton, "the first train for New York. At New Haven we met the New York train; the boys were crying the pa-

pers, 'Death from Ether!' I stole out of the cars, purchased a paper, and learned that a patient had been sent to the hospital because she had terrible spasmodic pains in the head; that an hour after entering a few inhalations of ether were administered to her, when her nails turned dark, her lips purple, and she was dead. 'A clear case of death from ether,' said the surgeons as I arrived. I said no, and insisted on a *post-mortem* examination. No, the body would be called for, consent of friends could not be had, etc. With a bare hope that it might not be called for within the time prescribed by law I waited; but it was called for, and there was a dead lock; the case was spreading like fire over a prairie while my hands were completely tied. It was a State prison offense to procure that body; but with the conviction that it was not ether that killed, and that the cause of the death could be ascertained on examination, I determined to run the risk. The *post-mortem* examination had not continued an hour before there was found in the lower lobe of the brain a tumor about two-thirds the size of a hen's egg, and resembling one without the shell, showing that the tumor and not ether had caused the death."

Many sudden deaths are on record from this cause, but how was Morton to make use of this new-found truth to chase down the lie that was spreading with lightning speed? For obvious reasons he could not make known the means by which it had been ascertained. As soon as possible he prepared a paper on the subject, and spread it before the medical profession in all parts of the civilized world, and in every manner conceivable sought to overcome the opposition. So perfectly absorbed was he with this one business of introducing ether, and so enormous were the expenses he incurred, that his friends applied to court to have a conservator appointed over him.

Time would fail me to recapitulate the incredible efforts of this brave man to keep alive the spark of life in the infant Hercules. He made twenty-seven fruitless journeys to the hospitals of one city for the purpose of getting it tried there. He published a weekly bulletin of the successful cases in the English, German, and French languages. He secured the control of medical journals, newspapers, and editors. For one article he paid sixteen hundred dollars. According to the sworn testimony of R. H. Dana, Jun., "Dr. Morton hardly knew a full night's rest or a regular meal for three months." "Letters," continued this witness, "came pouring in upon Dr. Morton from all parts of the country. I have seen ten bound volumes, containing about two thousand letters, received by him on this subject between October, 1846, and July, 1847, some of them coming from distant lands and filled with queries. He was obliged to employ a secretary to answer these communications; to increase his accommodations at great expense. His dental business was neglected, and he risked all, labored, expended health, time, and money on his discovery. He issued circulars giving detailed accounts of the experiments, and kept a minute journal of events, experiences, and suggestions."

After a time he began to feel that his courage and industry were to have their reward. The accumulated, resistless evidence which he rolled upon the world began to make itself felt. The foreign surgeons were finally induced to make new experiments, and were successful. The theatres of hospitals became the scenes of operative display before distinguished surgeons, princes, and crowned heads, and the daily press teemed with the proceedings. The London journals hailed it as "the great American discovery," congratulated their transatlantic brethren upon the laurel wreath with which it crowned their country, and counseled that the joyous tidings should be spread through the lands and winged across the seas.

Morton soon found himself overwhelmed by inquiries from persons desiring to ascertain if they were of the class who could safely take ether. But all were not selfish who called and wrote. Letters of congratulation clogged his letter-box, and he began to receive the warm sympathies of the learned, the wise, and the good; the tender thankfulness of woman and the warm God bless you! of Christian men. The ocean steamers brought letters from eminent scientific men, and testimonials from several foreign courts. The Institute of France awarded to him its largest gold medal, and he holds honors in several foreign orders. Amidst this general enthusiasm one would have supposed that his troubles in reference to ether were forever ended.

The value of the benefits which the discovery was universally acknowledged to confer induced petitions to Congress urging upon Government the propriety of making an appropriation to cover the expenses that had been incurred, which amounted to over one hundred thousand dollars. The moment there was an intimation that money might be expected from the Government several contestants for the honor of the discovery appeared in the field. Here, then, was fresh work for Dr. Morton. He must set aside the claims of others, and establish his own to the discovery.

The claims of these contestants, with the arguments by which they were sought to be sustained, and the rebutting testimony, furnish interesting material for an article. It is impossible in this paper to enter upon the inviting field. With the remark that Morton's claim is now established, and acknowledged beyond controversy, the subject is dismissed.

It is not proposed to dwell upon the unmanly and incredible persecutions which Dr. Morton was now called to encounter, though there are points in this history which possess all the interest and fascination of a romance. Congress and the public were soon discouraged in trying to follow the controversy, and became disgusted with the whole subject of priority of discovery, and the discoverer was sunk in insignificance.

This being opposed to his ideas of justice, he applied to the courts in the principal cities to take the testimony (*in perpetuam rei memoriam*) of the profession and others who were familiar with his labors and experiments. As the opponents cross-examined the witnesses, this occupied a long period. Dr. Bigelow, for instance, was on the stand thirty-six hours. These gentlemen chose their own hours, while this commission was under pay, wading through the business, the same process going on in three different cities. A year and a half was consumed in this manner; and before the testimony was recorded—which was necessary—and printed in form to be used before the committee of Congress, it cost many thousand dollars. It was so lengthy that it was difficult to find a committee to examine it. It was not until a new Congress that it received an examination, when the committee made a report establishing Morton's claim as the discoverer beyond all question. This report has been reaffirmed by several subsequent Congressional reports, and by the scientific societies which have examined the subject.

A bill to reward the discoverer was put upon the private calendar in the Senate, which, having passed the Senate, was lost in the House by a small vote, at a midnight session. That this defeat resulted from the reluctance of Congress to appropriate the money was demonstrated from the fact that a reported bill, appropriating the money, but leaving the courts to decide who should have it, was likewise defeated. The matter was pushed with the utmost diligence, but no bill could ever be safely navigated through both branches of the same Congress. A majority of both branches of Congress, utterly dissatisfied with these failures, joined Morton in a written protest to the President as Commander-in-Chief of the army and navy, asking that he would either purchase the right to use the patent or issue an order to his subordinates to desist using the discovery, on the grounds "that private property should not be taken for public use without just compensation." The President referred the matter to the Secretary of War, who reported back to the President, by whom it was then referred to the Attorney-General. The Executive finally required as a prerequisite a suit and a judgment against an army or navy surgeon for using Morton's discovery, agreeing that the officer should be instructed to admit the use of any article he might be using covered by Morton's patent. The tempest-tossed discoverer expressed to the President his fears lest such a course might awaken the opposition of the profession, and retard the introduction of the discovery for which he had so long and assidnously labored. Upon the President's assurance that the whole responsibility would be on the Executive, Morton brought suit, recovered judgment, and in due time, but after a change of administration, and an expenditure of several thousand dollars, produced a record of the judgment to Howell Cobb, then at the head of the Treasury Department, to which the hospital belonged. He hesitated, and finally refused to carry out the order of the President. Being desirous to stand exonerated with the medical profession, Dr. Morton made an exposition of the above facts in relation to the suit. Of this the Secretary of the Treasury took advantage, alleging that the suit, being friendly, he should require a suit to be brought against other institutions than Government to establish the patent. Having gone so far in the matter that it was ruin to retreat, Morton reluctantly brought other suits, but before trial could be had the patent expired, and the whole matter fell through.

It has not been thought necessary to defend Morton in taking out a patent in a matter in which the comfort of humanity was so largely at stake. Among many reasons for this step, which was taken after thoughtful consultation with judicious persons, was the desire to restrain so powerful an agent as ether, which might be used for nefarious purposes, and to provide some proper security against interference from *ex post facto* claimants. With the reception of the patent Morton gave, through Dr. John C. Warren, to such hospitals and charitable institutions as he should name, and to all competent persons, permission to use the discovery. "I never doubted," said Morton, "that the proper authorities would take it out of private hands if the public good should require it."

By the three contests, viz., that of introducing the discovery, the contest for the honor of the discovery, and that waged for years with the Government, Morton found his health so impaired that his life was despaired of, his lucrative business, which yielded an income of $10,000 yearly, destroyed, and his means and credit expended.

So matters stood with him when the rebellion broke out. Morton made an arrangement with the Government that, when he was telegraphed to "bring that trunk," he was to understand that his own body was meant, while the people would not be informed that a battle was impending.

Dr. Morton has attended the principal battle-fields, administering anæsthetics with his own hands two thousand times in a single battle. During the ten days' fighting at the battle of the Wilderness and Spottsylvania Court House, there were, according to official reports, twenty thousand wounded men. Many of these, of course, needed surgical operations.

The following account is from an army correspondent:

"After an engagement the ambulance wagons are rushed to the front and loaded with the wounded, who are brought to the rear and spread upon the ground. The experienced surgeons then pass among them, probing the wounds, and pinning upon each man, who requires an operation, a ticket, designating the nature of the operation. On this occasion the wounded who needed immediate operations were removed to a secluded spot and laid in a row. Then Dr. Morton passed from one to the other, administered ether or chloroform at the rate of three minutes to the man, and without a single failure prepared them for the knife. He was followed by the surgeon who performed the operation, leaving the dressing of the wound to the less experienced

surgeons. This last being completed, the patient was by the orderlies conveyed, still asleep, to his tent, where on waking he learned that the dreadful operation was ever. A dozen operations were sometimes completed before the first man had come from his anæsthetic state.

"The comfort of anæsthetic agents to the soldier does not stop here. His wounds are daily dressed under their influence. And one who has ever heard the groans and cries and prayers which rise from those ambulance wagons as the men piteously beg not to be moved, must acknowledge the priceless value of this boon to man, for the wagons are loaded and unloaded under their influence. After the retreat at Fredericksburg hundreds were loaded and unloaded by the aid of Dr. Morton's discovery."

Will it be credited when I say that since this war began, in the face of these great demonstrations of the value of this discovery, that applications have been made to the Government for remuneration on five different occasions? At this point an association of the most eminent merchants and scientific men of the country made a move in the matter. They petitioned Congress to remunerate Dr. Morton, the discoverer of Anæsthesia, for the expenditures he had incurred in bringing the discovery to the status it now enjoys. This association spared no pains which could have weight with Congress. They procured petitions, memorials, resolutions from the great bulk of the members of medical associations, scientific societies, professors and surgeons of the principal colleges and hospitals, surgeons, officers, and wounded soldiers of the army and navy, urging upon Congress an appropriation in Morton's favor for the use of anæsthetics in the army and naval practice. Accompanying their petition were some thousand letters of introduction addressed to different members of Congress by distinguished gentlemen from all parts of the Union, urging them to make vigorous efforts to procure the appropriation. The letters from the surgeons of the army established the fact that mortality from surgical operations during the present war has been greatly curtailed by the use of anæsthetics; that they contribute to the more rapid recovery of the patient; that one surgeon can do more with this agent than four without it; that it increases the daring of the soldier on the field, and diminishes the objections of many minds to enlistments. Added to this testimony the Surgeon-General made a recommendation that Congress should pay Dr. Morton $200,000.

The House of Representatives committed the whole subject to the Committee of Ways and Means. The petitions were hung up in the committee-room for their information, covering the walls. A slight examination of the subject showed them that the claim had gone through all the legislative, administrative, executive, and even judicial departments of the Government. They therefore voted to put it into one of the appropriation bills. It came into the House some ten days after the battles of the Wilderness, at a moment when one could look out of the Capitol and see acres of barracks termed hospitals filled with wounded men for whose comfort and relief anæsthetics were used a thousand times a day. Yet the subject was not under consideration five minutes before the appropriation was dead.

But while our cheeks are crimsoned in contemplating this injustice, it is a comfort to know that the most distinguished men of our country are holding meetings and forming associations to induce the people to do what the Government was unwilling or unable to do. National testimonials, established by the voluntary subscriptions of individuals, have been adopted by all countries to mark the public sense of services to the human family, particularly when such services have reflected honor and distinction upon the country where they have been performed. When we consider this discoverer, health impaired, business destroyed, property gone, embarrassed by annoying debts, "inaction" seems "crime."